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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,787	02/12/2001	Martin Stanton	102282-0008	6971

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NUTTER MCCLENNEN & FISH LLP  
WORLD TRADE CENTER WEST  
155 SEAPORT BOULEVARD  
BOSTON, MA 02210-2604

EXAMINER

THOMAS, COURTNEY D

ART UNIT PAPER NUMBER

2882

DATE MAILED: 02/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/781,787

Applicant(s)

STANTON ET AL.

Examiner

Courtney Thomas

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20-39 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of claims 20-39 in Paper No. 9 is acknowledged.
2. Claims 1-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention. Election was made **without** traverse in Paper No. 9.

### *Specification*

3. The disclosure is objected to because of the following informalities:
4. Pending application 09/298,381 (cited on p. 7, 3rd paragraph and p. 19, 2<sup>nd</sup> paragraph) is now U.S. Patent No. 6,448,544. This change should be updated in the disclosure.
5. The equation written on p. 17, 2<sup>nd</sup> paragraph is ambiguous since the use of "□" is undefined.
6. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 20-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klotz et al. (U.S. Patent No. 5,852,646) in view of Dillen et al. (U.S. Patent No. 6,265,736)

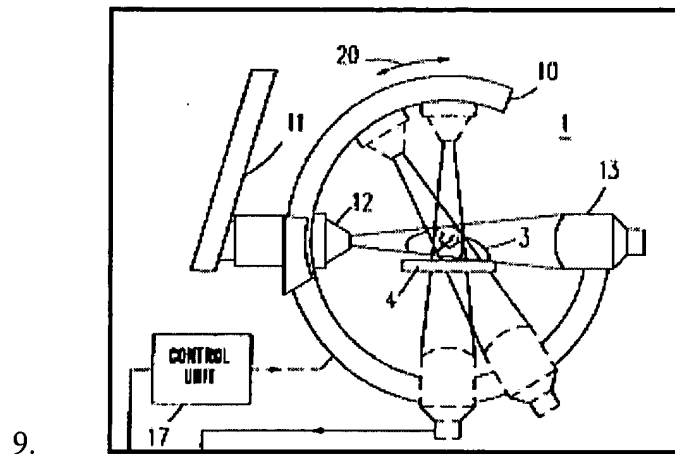


Figure 1 - U.S. Patent 5,852,646 to Klotz et al.

10. As per claims 20, 28, 35 and 38, Klotz et al. disclose a method (and system) comprising the steps of:

11. a) irradiating a scene from a plurality of angular positions (via source 12)

12. b) detecting radiation transmitted through the scene (via detector 13) at a plurality of angular positions

13. c) producing radiation transmission data representative of the intensity of the radiation transmitted through the scene at each of the plurality of angular positions and producing an image of the scene (via image processing unit 16 (not shown above); abstract, column 4, lines 31-53). Examiner notes the above system can be configured for uniform angular movement or non-uniform movement about the object of interest.

14. Klotz et al. do not explicitly disclose a method wherein detection of transmitted radiation is achieved at different spatial resolutions.

15. Dillen et al. teach a method wherein radiation data is captured at different spatial resolutions (abstract, column 5, lines 18-25, Fig. 1). Dillen et al. teach that varying the spatial resolution of a detector during radiation capture results in the production of images of high

detail. Additionally, Examiner notes that varying spatial resolution allows the creation of smooth and continuous transition in effective resolution between detail-level images and surrounding area images that are less visually disruptive to an observer than is an abrupt transition in effective resolution.

16. It would have been obvious to modify the method of Klotz et al. such that it incorporated the step of detecting radiation transmitted through a scene at a plurality of different spatial resolutions corresponding to the plurality of angular positions. One would have been motivated to make such a modification so that radiation capture results in the production of images of high detail; while creating smooth and continuous transitions between detail level images and surrounding area images as suggested by Dillen et al. (abstract, column 5, lines 18-25, Fig. 1).

17. As per claims 21, 24, 25, 26, 27, 30-34 and 36, Klotz et al. disclose a method (and system) comprising the steps of irradiating a scene with x-ray radiation; wherein the plurality of angular positions forms an arc about the scene, the arc spans a plane and has an axis of rotation on a line in the plane that is perpendicular to the scene and extends through approximately the center of the scene and varying the angular spacing between the plurality of angular positions (abstract, Fig. 1 above).

18. As per claims 22, 23 and 37, Klotz et al. as modified, do not explicitly disclose a method wherein the total radiation dose is less than or equal to a dose of a standard screening mammogram.

19. It would have been obvious to further modify the method and system of Klotz et al. such that the source produces a total radiation dose less than or equal to a dose of a standard screening mammogram. One would have been motivated to make such a modification so that radiation

energy is sufficient to obtain attenuation data of a portion of a patient, while maintaining the radiation exposure level to that of conventional mammogram screening methods (and systems). Examiner notes this modification would be well within the skill level of a practicing radiologist or physician, and is considered to be an obvious design choice commensurate with an intended mammary investigation.

20. As per claims 29, Klotz et al. as modified, do not explicitly disclose a system wherein the detector is a low noise detector.

21. It would have been obvious to further modify the system of Klotz et al. such that it incorporated a low noise detector. One would have been motivated to make such a modification so that high quality images can be produced due to the removal of low frequency noise responsible for signal degradation.

22. As per claim 38, Klotz et al. as modified, do not explicitly disclose a method wherein an object is irradiated with a first radiation dose at a first position and subsequently with a second radiation dose at a second position; the first radiation dose being different from the second.

23. It would have been obvious to modify the method of Klotz et al. such that it incorporated the method step cited above. One would have been motivated to make such a modification so that images can be obtained to reveal attenuation contrasts between position and radiated energy. This practice is commonly known as dual energy radiation imaging, and it is employed as a means of extracting greater image detail from an object under investigation.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (703) 306-0473. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305 3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0530.

Courtney Thomas

February 12, 2003

*K*  
EXAMINER  
FEB 12 2003